

NUCLEAR FREE FUTURE

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The Atomic Age was inaugurated in 1942 in the deserts of New Mexico when scientists from around the world gathered to design the atom bomb. With the Manhattan Project, the US began the fifty-year experiment with nuclear weapons and atomic power that continues to this day.

But the experiment, begun in 1942, is now spiraling out of control. Deadly radioactive waste is piling up across our country. Radiation is entering our air, our land, our water and our bodies, causing cancer and genetic damage. Dangerous, accident-prone nuclear reactors are churning away. Nuclear weapons are still deployed around the globe and the specter of nuclear proliferation is growing.

The Greenpeace Nuclear Free Future Campaign demands an end to the experiment. We do not need nuclear weapons to keep the peace, and atomic power has proven to be the most dangerous and expensive way to produce electricity. The time for a nuclear free future is now.



Nuclear Weapons Don't Lead to Security

If we learned anything from the Persian Gulf War it is that nuclear weapons do not prevent war. Nuclear weapons did not prevent us from entering this war. They did not help win it. And they posed the danger of widespread radioactive contamination had one accidentally exploded or been damaged in an attack.

There is no evidence that nuclear weapons have contributed to world security over the last 50 years. In fact, they diminish it by consuming hundreds of billions of dollars urgently needed for programs like education, housing, health care and environmental clean-up. And

nuclear weapons do not keep the peace: there have been at least 134 wars since 1945, many involving nuclear weapons states.

Testing Our Patience

The US Department of Energy (DOE) continues to test nuclear weapons deep underground at the Nevada Test Site, 65 miles northwest of Las Vegas. Each time a nuclear warhead is

exploded a new underground nuclear waste site is created, deadly radioactivity is vented into the atmosphere and \$30 to \$60 million (or more) are instantly vaporized. Even though the US plans to conduct the lowest number of nuclear weapons tests in 30 years (6-8), in 1992 DOE will spend \$511 million in direct costs for nuclear weapons testing and plans to spend \$474 million in 1993. Can the US taxpayers afford \$1 billion to maintain a Cold War relic?

Many nations of the world, including Russia and France, are demanding an immediate end to nuclear testing. Russia is enforcing a one-year moratorium begun by former President Gorbachev in October 1991. In April 1992, France announced the cancellation of its 1992 testing series.



Lee Corkran/Greenpeace

In front of the White House, a Greenpeace activist locked herself to a light post to protest President Bush's decision not to join the French and Russian nuclear testing moratorium (April 1992).

In late 1991, the Nuclear Testing Moratorium Act, requiring a one-year testing moratorium, was introduced in the US Congress. The Act passed the House of Representatives. In August 1992, the Senate passed a revised version of the Act by a 68-26 margin. The Senate's version establishes a nine-month testing moratorium until June 1993, sets a limit of

a vision for the '90s

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In Czechoslovakia (CSFR), Greenpeace climbers demand that construction of this nuclear power reactor, built on an earthquake fault, be immediately halted.

five tests per year between now and 1996 (with a 15 test cap), mandates a permanent halt to US testing by September 30, 1996 and calls for negotiations between the US and other nuclear countries toward a Comprehensive Test Ban Treaty (CTBT). Despite its merits, the bill may be weakened during negotiations between the House and the Senate and President Bush has already pledged to veto the Act when it crosses his desk. Whatever the outcome, Greenpeace will continue to campaign for a complete halt to all nuclear testing.

The US is wasting a historic opportunity to abolish nuclear testing and inhibit the proliferation of nuclear weapons. France and Russia have stated that they will resume testing in 1993 unless the United States commits to a moratorium on testing. Some countries have threatened to pull out of the Nuclear Non-Proliferation Treaty — up for review in 1995 — if the nuclear powers continue to stall.

Before the break-up of the Soviet Union, the US justified its testing program as necessary to counter Soviet tests and weapons development. Now the DOE defends testing as necessary to ensure the reliability and safety of a shrinking nuclear

arsenal. However, there are ways to ensure safety and reliability that do not require underground explosions. In fact, this “argument” is a thinly-veiled attempt to disguise continued development of new nuclear weapons.

The responsibility to abolish nuclear testing rests squarely on the shoulders of the United States. The time for a Comprehensive Test Ban Treaty is *now*.



Poisonous Power

In the 1950s US nuclear advocates looking to put a positive spin on nuclear bomb development began

the Atoms for Peace program. They promised that atomic energy would be “inherently safe” and “too cheap to meter.” Instead, nuclear power has brought us a continuing nightmare of expense, accidents and radioactive waste.

In the US, more than \$500 billion has been spent on atomic power development over the last four decades. Nuclear power gives us barely 8% of our energy — less than firewood — yet the nuclear industry wants to keep on spending. There is no reason to believe the industry’s claim that tomorrow’s new reactors will be less expensive than today’s. According to the *New York Times*, “building new nuclear plants at prices now prevailing would be like conserving dog food by substituting sirloin.”

All nuclear power plants threaten us with accidents. In 1986, a reactor in Chernobyl, USSR, exploded, spewing deadly radioactivity for thousands of miles. Some experts estimate that up to 500,000 people will eventually die from this accident and the economic damage will top \$400 billion. Environmental contamination will last for thousands of years.

In addition to producing deadly radioactive wastes (see next section), atomic power plants *routinely* release

radiation into the air and water. This radiation can cause higher rates of cancer, mutations in farm and other animals and possible genetic damage in humans. In Massachusetts, residents who lived within a ten-mile radius of the Pilgrim reactor were proven to be four times more likely to develop leukemia.

President Bush’s National Energy Strategy calls for up to 200 new nuclear power plants by the year 2030. The cost of this project would be astronomical, and if completed, would produce so much radioactive waste we would be literally buried in it.

Now the nuclear power industry is trying to tell us that nuclear power will save the planet from global warming. Nothing could be farther from the truth.

Even with enormous expenditures, nuclear power would not stop global warming. An analysis by energy experts B. Keepin and G. Kats demonstrates the real cost of using nuclear power to reduce greenhouse gas emissions. In order to replace coal-fired electricity generating plants worldwide, more than five thousand large nuclear reactors would have to be built between now and the year 2025. This means, on average, a new nuclear plant opening every two or three days from now until 2025. The capital costs alone would be \$5.3 trillion, or an average of \$144 billion each year. Despite these exorbitant expenditures, global CO₂ emissions would continue to rise.

And, a nuclear “solution” to global warming would mean poisoning ourselves with radioactive wastes that remain lethal for hundreds of thousands of years. The US civilian nuclear power program has already generated more than 20,000 metric tons of deadly high-level waste, with no disposal solution in sight. Five thousand new reactors worldwide would mean an additional 100,000 tons of high-level waste per year.

There is no need for nuclear power. We are currently witnessing a technological revolution in energy efficiency measures and in safe, renewable sources of energy, such as solar power and wind energy. The time has come to phase out the 110 operating US nuclear power plants which poison the countryside and continually threaten us with another Chernobyl.

Ott/Greenpeace



Radioactive Waste Crisis

Deadly radioactive waste continues to pile up from the atomic reactors and bomb factories (see next section). A desperate atomic industry is promoting dangerous "solutions" for their mess. They can always find experts to claim that radioactive waste isn't so bad, but the facts remain: dumps leak and radiation causes cancer and genetic damage.

The nuclear industry is now trying to force so-called "low-level" nuclear waste — radioactive clothing, machinery and components from nuclear power plants — onto various communities across the country. For example, in Ward Valley, California, West Valley, New York, and Sierra Blanca, Texas, citizens are up in arms over the prospect of their communities becoming radioactive wastelands.

The US Department of Energy (DOE) wants to dump deadly high level waste — spent fuel from nuclear reactors — in a deep hole in Nevada called the Yucca Mountain Project. Seventy-five to eighty percent of Nevadans strongly oppose it. The DOE has no conclusive scientific evidence that this dump won't leak or be ripped open by earthquakes, volcanoes, groundwater intrusion or sabotage. They have not even been able to create a warning sign that will last for the 240,000 year toxic life-span of plutonium. The \$1.5 billion already spent on Yucca Mountain has produced little progress, due to the virtual impossibility of building a safe dump.

With no permanent dump available, a desperate nuclear industry is attempting to site a "temporary" waste dump called the Monitored Retrievable Storage (MRS) facility. The wastes would allegedly remain at the MRS dump only temporarily — until a permanent dump is found.

But where? The government's proposed permanent nuclear waste dump at Yucca Mountain is already 12 years behind schedule and will probably never be built. It is likely that radioactive waste will remain at "temporary" dumps indefinitely. The DOE is playing a lethal shell game with radioactive waste because there is just no safe way to dispose of it.

The DOE plans to dispose of plutonium-contaminated waste from nuclear weapons production in the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. Billions of dollars have already been spent, yet problems such as cave-ins, water intrusion and potentially explosive gas generation from decaying wastes are still unresolved. These technical problems and vocal public opposition have delayed WIPP's opening. In 1991, a federal judge ruled that DOE had not met several important requirements for opening WIPP and applied an injunction against shipping waste to WIPP. It is now uncertain if WIPP will ever open.

There is simply no safe way to dispose of nuclear waste. The only solution to the radioactive waste crisis is to immediately stop producing nuclear waste. We must stop building nuclear bombs and phase-out all nuclear power plants. Then discussion can begin over what to do with the hundreds of thousands of tons of deadly waste already created.



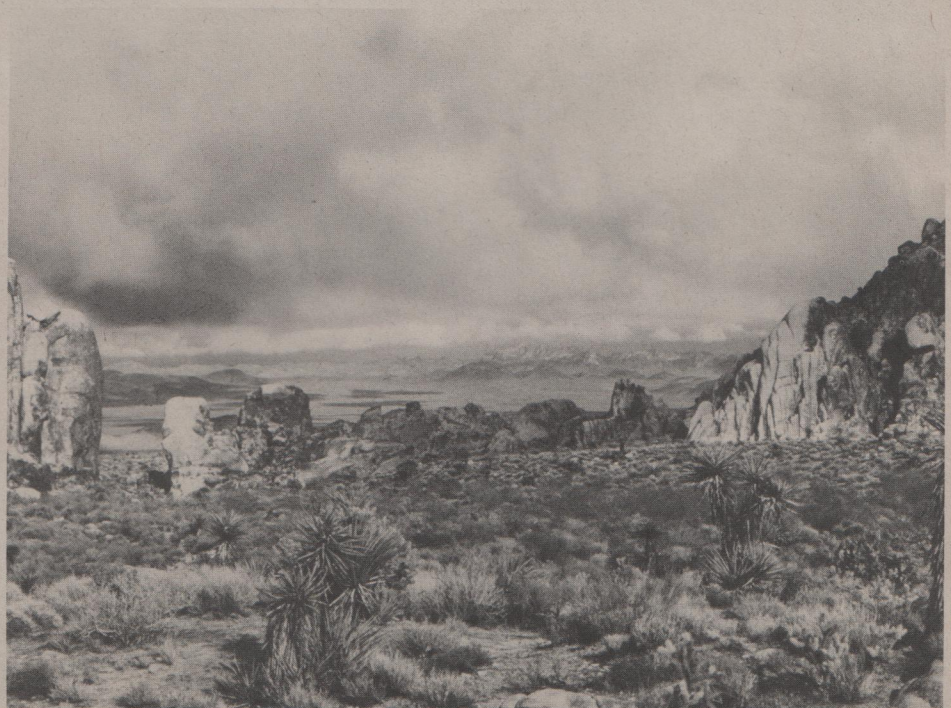
DOE: Department of Energy or Extinction?

The Cold War is over. Yet the Bush Administration is quietly pushing for production of new nuclear weapons through the year 2050.

The DOE is trying to "modernize" the bomb factories at a cost of as much as \$15.2 billion, despite the fact that Russia is not considered a nuclear threat. DOE still plans to build the dangerous New Production Reactor to produce tritium — a radioactive gas necessary in modern weapons — at a cost to taxpayers of more than \$6 billion. DOE Secretary Watkins has delayed deciding where to build this reactor until mid-1993.

Worse, due to the delay on the New Production Reactor, the DOE is again trying to restart the dangerous, obsolete "K" reactor at the Savannah River Plant in South Carolina to produce tritium. DOE's first attempt at restart in December 1991 resulted in the release of several thousand gallons of radioactive water into the Savannah River. Additional attempts to restart the reactor have also failed due to numerous problems with safety systems and other reactor operations.

DOE also wants to place the Rocky Flats plant in Colorado (closed since November 1989 for safety reasons) on "stand-by" for future nuclear weapons production despite more than 69 DOE applications for variances from environmental and safety regulations. And to ensure the ability to build more nuclear bombs, DOE wants to



The US government wants to turn this pristine California desert, and other equally precious ecosystems, into dumps for so-called "low-level" radioactive waste.

move Rocky Flats' operations to another facility.

Fifty years of atomic bomb production have left us and our children with a terrible legacy. The US Congress' Office of Technology Assessment estimates that the clean-up at atomic bomb factories will cost up to \$200 billion, if they can be cleaned up at all. Deadly radioactive waste has turned nuclear weapons factories like Hanford in Washington, Rocky Flats in Colorado and the Savannah River Plant in South Carolina into "national sacrifice zones."

Much of the problem lies with the Department of Energy. In fiscal year 1991, 63% of DOE's budget was earmarked for atomic bomb production. Our country needs a Department of Energy that develops safe, renewable sources of energy like solar and wind power, not one that continues to build nuclear bombs. The DOE's budget should be immediately shifted from nuclear weapons production to radioactive waste clean-up and to safe, renewable energy development.



Nuclear Free Future? Start Now

For 21 years, Greenpeace has been working for a nuclear-free world. Recent events have brought us closer to this goal, but nuclear weapons are still seen as necessary to national security and nuclear power is still promoted as the answer to global warming. At the end of the nuclear era, and the beginning of a new millennia, Greenpeace will campaign for total nuclear disarmament, an immediate phase-out of nuclear power and the safest possible containment of all radioactive materials.



Randi Baird/Greenpeace

Greenpeace activists occupy ground zero at the US nuclear test site in Nevada. Despite mounting pressure to end nuclear testing, the protesters documented preparations for future US tests (June 1992).

What You Can Do

✓ Write your Senators, Representatives and President Bush to demand:

1. An immediate halt to nuclear testing and a permanent, international ban on nuclear testing through a Comprehensive Test Ban Treaty;
2. An immediate halt to US nuclear weapons production. All money slated for production used for clean-up activities.
3. The elimination of funding for nuclear weapons research, development, testing and production;
4. Money and support for research, development and use of energy efficiency measures and renewable sources of energy.
5. Cancellation of the WIPP and Yucca Mountain high-level radioactive waste disposal projects.
6. Cancellation of the MRS (Monitored Retrievable Storage) disposal project.
7. Immediate cancellation of all plans and funding to develop new nuclear power plants. Immediate phase-out of all existing reactors.

Honorable (your Representative)
US House of Representatives
Washington, DC 20515

Honorable (your Senator)
US Senate
Washington, DC 20510

President George Bush
The White House
1600 Pennsylvania Ave., NW
Washington, DC 20500

- ✓ Join the Greenpeace Activist Network to receive updates and Action Alerts about letter writing, demonstrations and other actions you can take to end the nuclear age.
- ✓ Contact the district offices of your Representatives and Senators and request a meeting to discuss their position on nuclear issues.
- ✓ Write letters to the editor on nuclear issues. Send copies to your Representatives and Senators.
- ✓ Contact Greenpeace for more specific information on these issues.



James Perez/Greenpeace

Alternative energy sources like these California wind farms generate inexpensive, renewable, clean power yet receive less than a quarter of the subsidies and incentives given to polluting energy sources such as coal, oil and nuclear power.